

*Fig. 10*

human : GDVEKGKKIFIMKCSQCHTVEGGKHKTGPNLHGLFGRK SEQ ID NO: 1  
bacterium : EGDAAAGEKVSKKCLACHTFDQGGANKVGPNNLFGVF SEQ ID NO: 2

LCS : GD{x3.3}G{x0.1}K{x0.2}K{x4.0}K{x2.2}CHT{x3.3}GG{x2.2}K  
GD{x1.4}E{x0.2}K{x0.2}K{x0.4}K{x2.2}CHT{x3.3}GG{x2.2}K

homology : 47%

## Fig. 11

Rat : MSLAILRVIRLVRVFRIFKLSRHSKGLQILGRTLKASMRELGLLFFIGVV

SEQ ID NO: 3

leucinzip. L(6)L(6)L(6)L(6)L

## Fig. 12

human	: GDVEK G K KIFIMKCSOCHTVEKGG KHKTGPNLHGLFGRK ...	SEQ ID NO: 1
bacterium	: E GDAAAGEKVS KCLACHTFDGGANKV GPNPN LFGVF ...	SEQ ID NO: 2

**Fig. 23 A**

1	T E E Q I A E F K E	A F S L F D K D G D
21	G T I T T K E L G T	V M R S L G Q N P T
41	E A E L Q D M I N E	V D A D G N G T I D
61	F P E F L T M M A R	K M K D T D S E E E
81	I R E A F R V F D K	D G N G Y I S A A E
101	L R H V M T N L G E	K L T D E E V D E M
121	I R E A N I D G D G	Q V N Y E E F V Q M
141	M T A	

AMINO ACID SEQUENCE OF CALMODULIN  
(EXCERPT FROM PDB)

SEQ ID NO: 4

**Fig. 23 B**

1	A M D Q Q A E A R A	F L S E E M I A E F
21	K A A F D M F D A D	G G G D I S T K E L
41	G T V M R M L G Q N	P T K E E L D A I I
61	E E V D E D G S G T	I D F E E F L V M
81	V R Q M K E D A K G	K S E E E L A D C F
101	R I F D K N A D G F	I D I E E L G E I L
121	R A T G E H V T E E	D I E D L M K D S D
141	K N N D G R I D F D	E F L K M M E G V Q
161		

AMINO ACID SEQUENCE OF TROPONIN C  
(EXCERPT FROM PDB)

SEQ ID NO: 5



Fig. 26

Probe site = 81-108 and 117-143 in Calmodulin

96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	SEQ ID NO: 6
L	A	D	C	F	R	I	F	D	K	N	A	D	G	F	< target >
I	R	E	A	F	R	V	F	D	K	D	G	N	G	Y	< probe >
111	112	113	114	115	116	117	118	119	120	121	122	123			SEQ ID NO: 7
I	D	I	E	E	L	G	E	I	L	R	A	T			< target > SEQ ID NO: 6
I	S	A	A	E	L	R	H	V	M	T	N	L			< probe > SEQ ID NO: 7
132	133	134	135	136	137	138	139	140	141	142	143	144	145		SEQ ID NO: 8
I	E	D	L	M	K	D	S	D	K	N	N	D	G		< target >
V	D	E	M	I	R	E	A	N	I	D	G	D	G		< probe >
146	147	148	149	150	151	152	153	154	155	156	157	158			SEQ ID NO: 9
R	I	D	F	D	E	F	L	K	M	M	E	G			< target > SEQ ID NO: 8
Q	V	N	Y	E	E	F	V	Q	M	M	T	A			< probe > SEQ ID NO: 9

rmsd = 0.823665

**Fig. 29**

===== ATP/GTP binding site =====

**Probe = (elongation factor)**

7 8.9 10 11 12 13 14  
G H V D H G K T < probe > . SEQ ID NO: 10

```

-----
8 9 10 11 12 13 14 15      < target >
G A P G S G K K T
G H V D H G      < probe >
rmsd=0.648732      adenylate kinase
SEQ ID NO: 11
SEQ ID NO: 10

```

**unit - A**

.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:

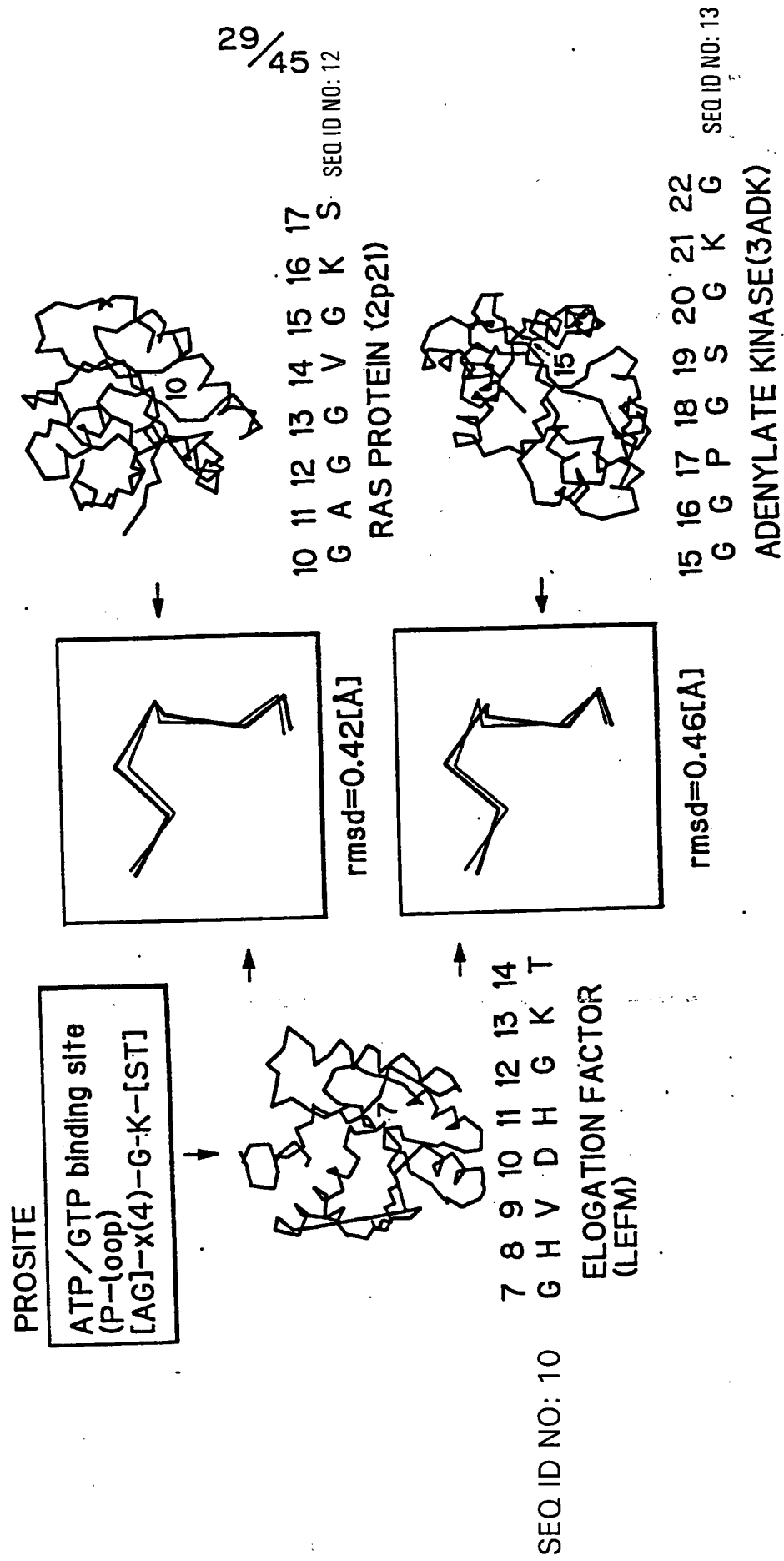
  

10	11	12	13	14	15	16	17												
G	A	G	G	V	G	K	S	<	target	>									
G	H	V	D	H	G	K	T	<	probe	>									

rmsd=0.421770      ras protein

SEQ ID NO: 12  
 SEQ ID NO: 10

Fig. 30





**Fig. 38 A**

1	I	V	G	G	Y	T	C	C	A	N	T	V	P	Y	Q	V	S	L	N	S
21	G	Y	H	F	C	G	G	S	L	I	N	S	Q	W	V	V	S	A	A	H
41	C	Y	K	S	G	I	Q	V	R	L	G	E	D	N	I	N	V	V	E	G
61	N	E	Q	F	I	S	A	S	K	S	I	V	H	P	S	Y	N	S	N	T
81	L	N	N	D	I	M	L	I	K	L	K	S	A	A	S	L	N	S	R	V
101	A	S	I	S	L	P	T	S	C	A	S	A	G	T	Q	C	L	I	S	G
121	W	G	N	T	K	S	S	G	T	S	Y	P	D	V	L	K	C	L	K	A
141	P	I	L	S	D	S	S	C	K	S	A	Y	P	G	Q	I	T	S	N	M
161	F	C	A	G	Y	L	E	G	G	K	D	S	C	Q	G	D	S	G	G	P
181	V	V	C	S	G	K	L	Q	G	I	V	S	W	G	S	G	C	A	Q	K
201	N	K	P	G	V	Y	T	K	V	C	N	Y	V	S	W	I	K	Q	T	I
221	A	S	N																	

SEQ ID NO: 14

AMINO ACID SEQUENCE OF TRYPSIN (EXCERPT FROM PDB)

**Fig. 38 B**

1	V	V	G	G	T	E	A	Q	R	N	S	W	P	S	Q	I	S	L	Q	Y
21	R	S	G	S	S	W	A	H	T	C	G	G	T	L	I	R	Q	N	W	V
41	M	T	A	A	H	C	V	D	R	E	L	T	F	R	V	V	V	G	E	H
61	N	L	N	Q	N	N	G	T	E	Q	Y	V	G	V	Q	K	I	V	V	
81	P	Y	W	N	T	D	D	V	A	A	G	Y	D	I	A	L	L	R	L	A
101	Q	S	V	T	L	N	S	Y	V	Q	L	G	V	L	P	R	A	G	T	I
121	L	A	N	S	P	C	Y	I	T	T	G	W	G	L	T	R	T	N	G	Q
141	L	A	Q	T	L	Q	Q	A	Y	L	P	T	V	D	Y	A	I	C	S	S
161	S	S	Y	W	G	S	T	V	K	N	S	M	V	C	A	G	G	D	G	V
181	R	S	G	C	Q	G	D	S	G	G	P	L	H	C	L	V	N	G	Q	Y
201	A	V	H	G	V	T	S	F	V	S	R	L	G	C	N	V	T	R	K	P
221	T	V	F	T	R	V	S	A	Y	I	S	W	I	N	N	V	I	A	S	N

SEQ ID NO: 15

AMINO ACID SEQUENCE OF ELASTASE (EXCERPT FROM PDB)

**Fig. 39 A**

Key site number 36 - 41 in Trypsin

41	42	43	44	45	46			
M	T	A	A	H	C	< target >	SEQ ID NO: 16	
V	S	A	A	H	C	< probe >	SEQ ID NO: 17	

d = 12.070038 [A]

r.m.s.d. = 0.061077 [A]

The number of atoms in a probe = 6

The number of atoms in PDB = 240

The number of combination = 1

Time = 1sec

RETRIEVED RESULTS OF HISTIDINE ACTIVE SITES

**Fig. 39 B**

Key site number 175 - 179 in Trypsin

186	187	188	189	190			
G	D	S	G	G	< target >	SEQ ID NO: 18	
G	D	S	G	G	< probe >	SEQ ID NO: 19	

d = 8.922721 [A]

r.m.s.d. = 0.092879 [A]

The number of atoms in a probe = 5

The number of atoms in PDB = 240

The number of combination = 1

Time = 1sec

RETRIEVED RESULTS OF SERINE ACTIVE SITES

Fig. 46

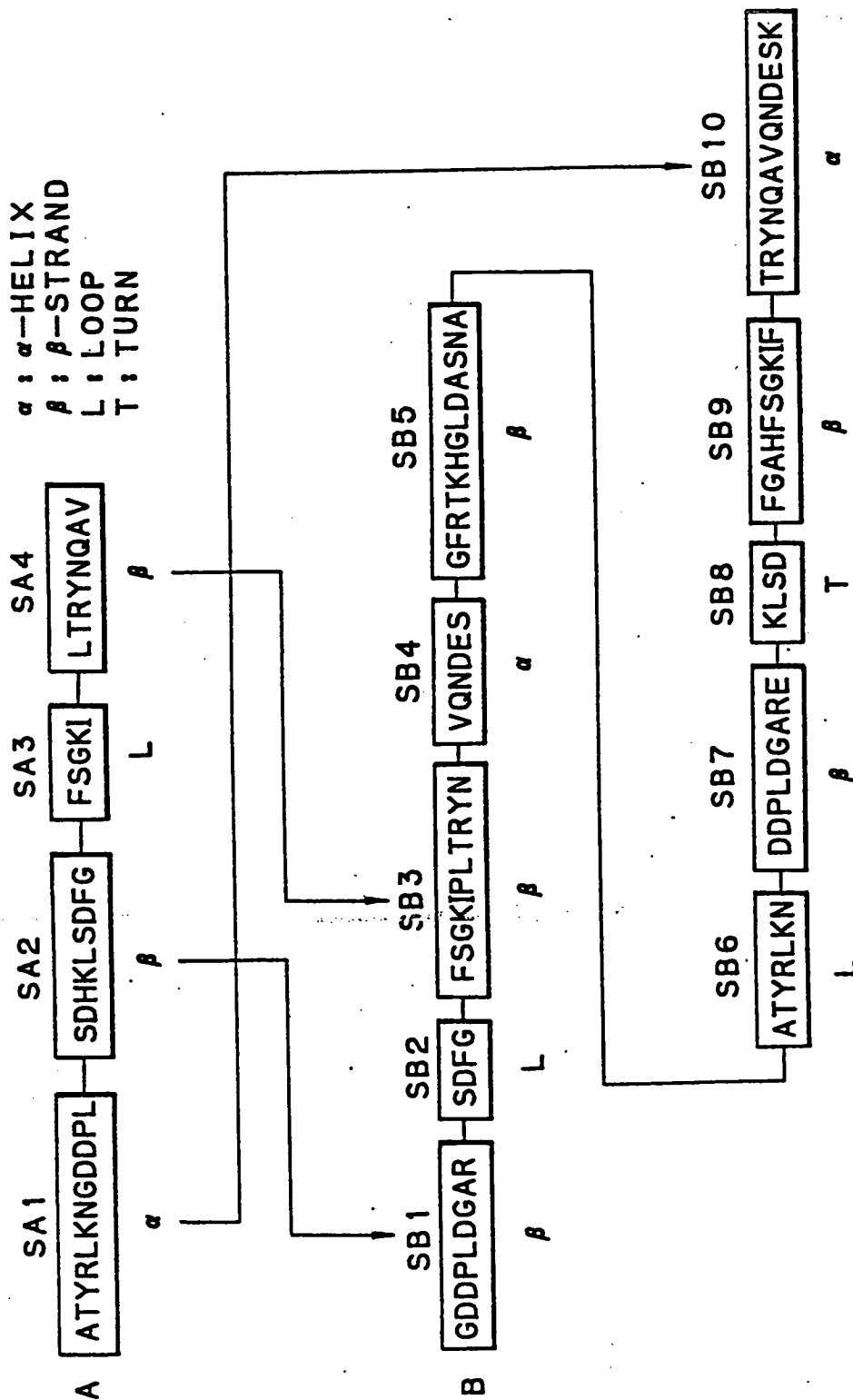


Fig. 10

human : GDVEKGKKIFIMKCSQCHTVEGGKHKTGPNLHGLFGRK SEQ ID NO: 1  
bacterium : EGDAAAGEKVSCKLACHTFDQGGANKVGNPNLFGVF SEQ ID NO: 2

LCS : GD(x3.3)G(x0.1)K(x0.2)K(x4.0)KC(x2.2)CHT(x3.3)GG(x2.2)K  
GD(x1.4)E(x0.2)K(x0.2)K(x0.4)KC(x2.2)CHT(x3.3)GG(x2.2)K

homology : 47%

# Fig. 11

Rat : MSLAILRVIRLVRVFRIFKLSRHSKGLQILGRTLKASMRELGLLFFIGVV

SEQ ID NO: 3

leucinzip. L{6}L{6}L{6}L{6}L

Fig. 12

human : GDVEK G K KIFIMKCSQCHTVEKGG KHK TGP N L H G L F G R K ... SEQ ID NO: 1  
bacterium : E GDAAAGEK VSK KCLACHTFDQGGANKV GP NPN LFGVF... SEQ ID NO: 2

**Fig. 23 A**

1	TEEQIAEFKE	AFSLFDKDG D
21	GTITTKELGT	VMRSLGQNPT
41	EAELQDMINE	VDADGNGTID
61	FPEFLTMMAR	KMKDTDSEEE
81	IREAFRVFDK	DGNGYISAAE
101	LRHVMTNLGE	KLTDDEEVDEM
121	IREANIDGDG	QVNYEEFVQM
141	MTA	

AMINO ACID SEQUENCE OF CALMODULIN  
(EXCERPT FROM PDB)

SEQ ID NO: 4

**Fig. 23 B**

1	AMDQQAEARA	FLSEEMIAEF
21	KAAFDMFDA D	GGGDISTKEL
41	GTVMRMLGQN	PTKEELDAI I
61	EEVDEDGSGT	IDFEEFLVM
81	VRQMKEDAKG	KSEEELADCF
101	RIFDKNADGF	IDIEELGEIL
121	RATGEHVTEE	DIEDLMKDSD
141	KNNDGRIDFD	EFLKMMEGVQ
161		

AMINO ACID SEQUENCE OF TROPONIN C  
(EXCERPT FROM PDB)

SEQ ID NO: 5

Fig. 25

Probe site = 81-108 in Calmodulin

96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	
L	A	D	C	F	R	I	F	D	K	N	A	D	G	F	seq ID no: 6
I	R	E	A	F	R	V	F	D	K	D	G	N	G	Y	< target >
111	112	113	114	115	116	117	118	119	120	121	122	123			< probe >
I	D	I	E	E	E	L	G	E	I	L	R	A	T		seq ID no: 7
I	S	A	A	E	E	L	R	H	V	M	T	N	L		seq ID no: 6
															< target >
															< probe >
															seq ID no: 7

rmsd = 0.567034



Fig. 26

Probe site = 81-108 and 117-143 in Calmodulin

96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	seq no: 6
L	A	D	C	F	R	I	F	D	K	N	A	D	G	F	< target >
I	R	E	A	F	R	V	F	D	K	D	G	N	G	Y	< probe >
111	112	113	114	115	116	117	118	119	120	121	122	123			seq no: 7
I	D	I	E	E	L	G	E	I	L	R	A	T			< target >
I	S	A	A	E	L	R	H	V	M	T	N	L			< probe >
132	133	134	135	136	137	138	139	140	141	142	143	144	145		seq no: 8
I	E	D	L	M	K	D	S	D	K	N	N	D	G		< target >
V	D	E	M	I	R	E	A	N	I	D	G	D	G		< probe >
146	147	148	149	150	151	152	153	154	155	156	157	158			seq no: 9
R	I	D	F	D	E	F	L	K	M	M	E	G			< target >
Q	V	N	Y	E	E	F	V	Q	M	M	T	A			< probe >

rmsd = 0.823665

Fig. 29

===== ATP/GTP binding site =====

Probe = (elongation factor)

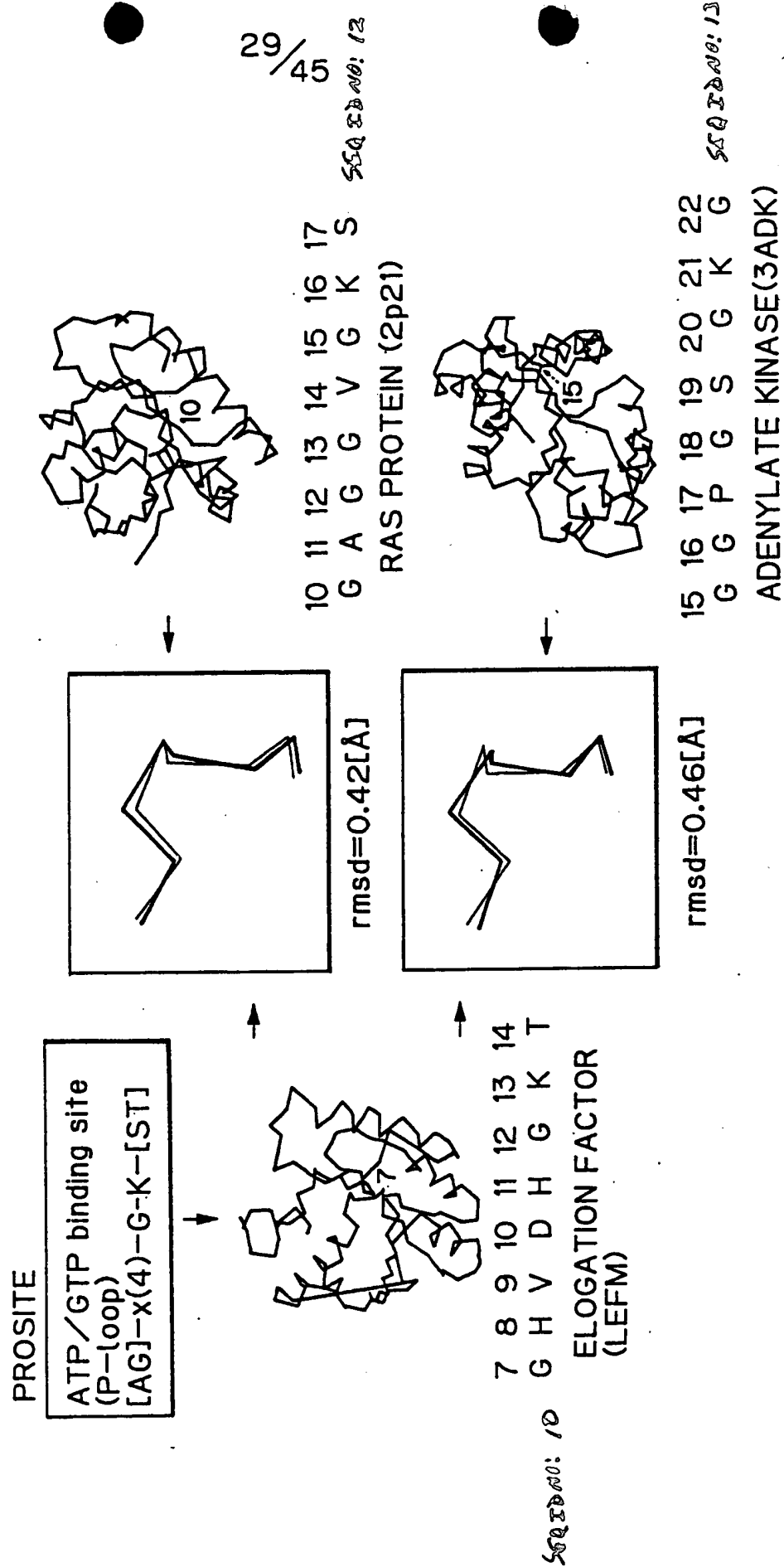
7 8 9 10 11 12 13 14  
G H V D H G K T < probe > SEQ ID NO: 10

8 9 10 11 12 13 14 15  
G A P G S G K G < target >  
G H V D H G K T < probe >  
rmsd=0.648732 adenylate kinase  
SEQ ID NO: 11  
SEQ ID NO: 10

unit - A

10 11 12 13 14 15 16 17  
G A G G V G K S < target > SEQ ID NO: 12  
G H V D H G K T < probe >  
rmsd=0.421770 ras protein  
SEQ ID NO: 10

Fig. 30



**Fig. 38 A**

1	I	V	G	G	Y	T	C	C	A	N	T	V	P	Y	Q	V	S	L	N	S
21	G	Y	H	F	C	G	G	S	L	I	N	S	Q	W	V	V	S	A	A	H
41	C	Y	K	S	G	I	Q	V	R	L	G	E	D	N	I	N	V	V	E	G
61	N	E	Q	F	I	S	A	S	K	S	I	V	H	P	S	Y	N	S	N	T
81	L	N	N	D	I	M	L	I	K	L	K	S	A	A	S	L	N	S	R	V
101	A	S	I	S	L	P	T	S	C	A	S	A	G	T	Q	C	L	I	S	G
121	W	G	N	T	K	S	S	G	T	S	Y	P	D	V	L	K	C	L	K	A
141	P	I	L	S	D	S	S	C	K	S	A	Y	P	G	Q	I	T	S	N	M
161	F	C	A	G	Y	L	E	G	G	K	D	S	C	Q	G	D	S	G	G	P
181	V	V	C	S	G	K	L	Q	G	I	V	S	W	G	S	G	C	A	Q	K
201	N	K	P	G	V	Y	T	K	V	C	N	Y	V	S	W	I	K	Q	T	I
221	A	S	N	SEQ ID NO: 14																

AMINO ACID SEQUENCE OF TRYPSIN (EXCERPT FROM PDB)

**Fig. 38 B**

1	V	V	G	G	T	E	A	Q	R	N	S	W	P	S	Q	I	S	L	Q	Y
21	R	S	G	S	S	W	A	H	T	C	G	G	T	L	I	R	Q	N	W	V
41	M	T	A	A	H	C	V	D	R	E	L	T	F	R	V	V	V	G	E	H
61	N	L	N	Q	N	N	G	T	E	Q	Y	V	G	V	Q	K	I	V	V	
81	P	Y	W	N	T	D	D	V	A	A	G	Y	D	I	A	L	L	R	L	A
101	Q	S	V	T	L	N	S	Y	V	Q	L	G	V	L	P	R	A	G	T	I
121	L	A	N	S	P	C	Y	I	T	T	G	W	G	L	T	R	T	N	G	Q
141	L	A	Q	T	L	Q	Q	A	Y	L	P	T	V	D	Y	A	I	C	S	S
161	S	S	Y	W	G	S	T	V	K	N	S	M	V	C	A	G	G	D	G	V
181	R	S	G	C	Q	G	D	S	G	G	P	L	H	C	L	V	N	G	Q	Y
201	A	V	H	G	V	T	S	F	V	S	R	L	G	C	N	V	T	R	K	P
221	T	V	F	T	R	V	S	A	Y	I	S	W	I	N	N	V	I	A	S	N

SEQ ID NO: 15

AMINO ACID SEQUENCE OF ELASTASE (EXCERPT FROM PDB)

**Fig. 39 A**

Key site number 36 - 41 in Trypsin

41 42 43 44 45 46

M T A A H C < target > SEQ ID NO: 16  
V S A A H C < probe > SEQ ID NO: 17

d = 12.070038 [A]

r.m.s.d. = 0.061077 [A]

The number of atoms in a probe = 6

The number of atoms in PDB = 240

The number of combination = 1

Time = 1sec

RETRIEVED RESULTS OF HISTIDINE ACTIVE SITES

**Fig. 39 B**

Key site number 175 - 179 in Trypsin

186 187 188 189 190

G D S G G < target > SEQ ID NO: 18  
G D S G G < probe > SEQ ID NO: 19

d = 8.922721 [A]

r.m.s.d. = 0.092879 [A]

The number of atoms in a probe = 5

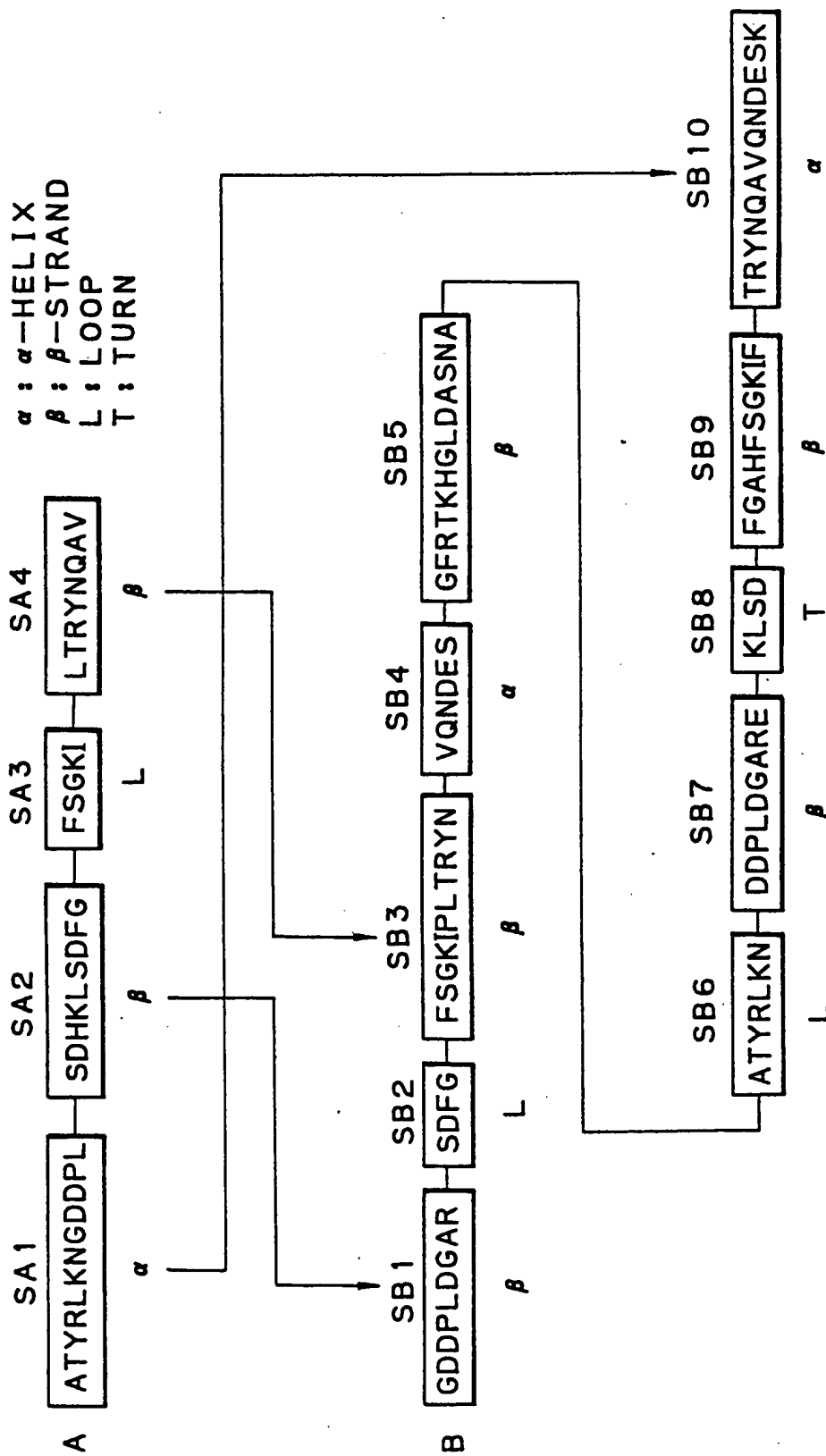
The number of atoms in PDB = 240

The number of combination = 1

Time = 1sec

RETRIEVED RESULTS OF SERINE ACTIVE SITES

Fig. 46



SEQ ID NO: 20